epiTRENDS

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FIRE! Injuries and Deaths Have Declined, but Males and the Elderly Still at Highest Risk

Burns and fires are the fourth leading cause of unintentional injury death in the United States, surpassed only by motor vehicle crashes, falls, and drowning. In Washington State, fires and burns are the seventh leading cause of unintentional injury death. Seventy Washington residents died from fire-related injuries in 1995 and 228 were hospitalized with nonfatal injuries, according to state mortality data and the Comprehensive Hospital Abstract Reporting System.

During the past 16 years, the rate of fire-related deaths has declined in Washington State and nationally. Data on nonfatal fire-related hospitalizations, available since 1989, reveal a similar trend. Washington's fire death rate has declined from close to 3 per 100,000 in 1980 to a range of 0.9 to 1.3 since 1990, which is consistent with the Year 2000 national objective of 1.2 deaths per 100,000 persons.

The elderly are at particular risk for fire-related injuries. Among men and women aged 75 or older, the 1995 combined injury and fatality rate was 13.3 per 100,000 in contrast to a rate of 5.5 for the general population. In all age groups males are at greater risk than females; in 1995, 70% of persons hospitalized or killed due to fire were male. The rate for males (7.7 per 100,000) was more than double the rate for females (3.3 per 100,000).

How and Where Fires Start

Housefires accounted for 42% of all hospitalized and fatal fire-related injuries in 1995, while 32% resulted from ignition of clothing or other flammable materials (table, page 2). Housefires accounted for 93% of fatalities. Injuries sustained in other types of fires were more likely to be nonfatal.

Cigarettes, cited in 28% of the deaths, are the leading cause of fatal housefires. Other major causes are heating equipment (15%), arson or suspicious fires (16%), and children playing with matches, lighters, or other ignition sources (10%). Cigarettes are especially important because they are the ignition source in 44% of fires from ignited bedding and 68% of fires that begin in upholstered furniture.

Prevention Measures

The National Fire Protection Association urges families to reduce their risk of fire-related injury by developing step-by-step escape plans. These plans should be practiced at least twice a year and updated as circumstances in the home change, such as the arrival of a new baby or an elderly family member. Families are further encouraged to limit their use of heating devices (e.g., space heaters and wood-burning stoves) and, if using a heating device, to carefully follow manufacturer's operating guidelines.

Each level of a home should have a functioning smoke detector to provide

Continued page 2

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Here's your chance to tell us.
See readers' survey inside.

In This Issue:

10.97

Fire-related Injuries *(from page 1)*

residents with sufficient advance warning for escape. Smoke detectors reduce the risk of death from residential fires by approximately 70%. The batteries in smoke detectors should be replaced at least once a year.

Further improvement in housefire death and injury rates might also be achieved through the development of "fire-safe" cigarettes, which fail to ignite household furnishings on contact. A study group commissioned by Congress in 1984 to assess the technical and commercial issues involved in the development of "fire-safe" cigarettes, found that such cigarettes are "technically feasible and may be commercially feasible" but they have yet to be marketed.

Replace the Batteries!

An estimated 93% of homes were equipped with a smoke detector in 1995, but only 74% of homes had a functional unit, according to the National Fire Protection Association.

TABLE: Fire-related injury outcomes in Washington State, 1995

Type of Fire	Nonfatal Hospitalizations No. (%)	Deaths No. (%)	All No. (%)
Structure, private dwelling	60 (26)	65 (93)	125 (42)
Structure, other building	13 (6)	0 (0)	13 (4)
Ignition of clothing or other flammable material (no structure involved)	95 (42)	1 (1)	96 (32)
Open/outdoor fire	38 (17)	4 (6)	42 (14)
Type unspecified	22 (10)	0 (0)	22 (7)
TOTAL	228 (100)	70 (100)	298 (100)

For more information on fire prevention activities, please contact the DOH Injury Prevention Program at 360-586-5693.

Information Resources

Baker SP, O'Neill B, Ginsburg JF, Li G: *The Injury Fact Book*, 2nd ed. New York: Oxford University Press, 1992.

U.S. Fire Administration: *Fire in the United States 1983-1987*. Emmitsburg, MD: U.S. Fire Administration (no date).

Consumer Product Safety Commission: *Eighth Annual Flammable Fabrics Report*. Washington, DC: U.S. Product Safety Commission, 1980.

Runyan CAW, Bangdiwala DI, Linzer MA, Sacks JJ, Butts J: Risk factors for fatal residential fires. *N Engl J Med* 1992; 327:859-63.

1996 Communicable Disease Report

The table on page 3 presents summary surveillance data for 1996. Highlights include:

- Reported cases of pertussis increased, from 140 in 1994 to 830 in 1996.
- The number of measles cases more than doubled from 17 in 1995 to 38 in 1996 due to an outbreak in Clark County.
- Both hepatitis B and C rates declined, after increases during 1995.
- All forms of syphilis (except congenital) declined from 212 cases in 1995 to 135 cases in 1996.
- Gonorrhea cases declined from 2765 to 2020; chlamydia cases also declined.

A copy of the1996 report is available from: Office of Epidemiology, Washington State Department of Health, 1610 NE 150th, Seattle, WA 98155-7224.

DOH Begins Initiative to Improve Surveillance Activities

Disease prevention and health promotion programs depend on accurate public health surveillance. Challenges in disease surveillance include the need to address emerging public health threats, to expand surveillance targets to include noninfectious conditions and behavioral risk factors, and to streamline cumbersome reporting systems and contribute to regulatory reform directives. To meet these challenges, the Department of Health is evaluating and redesigning its surveillance activities, revising surveillance targets and methods (along with changes to the defining administrative codes), and deploying DOH personnel and technology to support these activities.

The goal is to enhance DOH's ability to support a revised, integrated public health surveillance system. Comments and support will be sought from a wide range of stakeholders including local health jurisdictions, the State Board of Health, private provider groups, laboratories, and community-based organizations. Questions or comments on this initiative can be sent to Dr. Paul Stehr-Green, State Epidemiologist, via fax (360-705-6043) or e-mail (psg0303@hub.doh.wa.gov).

Annual Surveillance Data by County, 1996*

From the Annual Communicable Disease Report, Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Measles	Chlamydia	Gonorrhea	Syphilis	AIDS
Adams	0	1	1	4	0	2	0	1	0	0	28	4	0	0
Asotin	0	5	0	24	0	0	1	0	0	0	34	1	0	0
Benton	3	15	4	7	4	0	3	5	2	0	190	15	5	6
Chelan	3	6	4	5	1	1	2	1	1	0	99	6	1	1
Clallam	2	6	0	12	2	0	0	4	3	0	61	3	0	4
Clark	17	29	8	24	17	7	17	17	5	31	505	95	5	22
Columbia	0	0	0	0	0	0	0	0	0	0	13	1	0	0
Cowlitz	1	3	1	52	5	2	3	4	7	1	101	6	1	6
Douglas	1	1	0	3	0	0	2	0	0	0	42	6	1	0
Ferry	0	0	0	0	1	1	0	2	0	0	10	0	0	0
Franklin	1	9	3	4	1	1	2	4	6	0	133	20	4	0
Garfield	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Grant	0	9	2	8	0	3	3	6	2	0	125	15	0	1
Grays Harbor	1	7	1	16	5	1	1	1	2	0	117	18	0	1
Island	3	4	0	4	0	0	5	1	3	0	44	10	1	5
Jefferson	0	5	11	1	0	0	0	1	1	0	12	0	0	4
King	58	235	66	431	72	10	30	262	128	5	3226	924	61	490
Kitsap	3	28	2	63	3	0	3	54	10	0	456	77	5	11
Kittitas	2	7	2	4	0	0	0	1	0	0	58	2	0	1
Klickitat	1	2	0	2	0	0	1	0	1	0	19	0	0	1
Lewis	2	2	1	11	0	0	4	1	0	0	90	15	0	2
Lincoln	1	1	1	0	0	0	0	0	0	0	2	0	0	0
Mason	0	0	0	51	5	8	1	6	0	0	62	7	6	5
Okanogan	1	1	18	2	1	1	2	1	4	0	62	6	0	1
Pacific	0	4	0	0	1	1	0	0	2	0	29	2	0	0
Pend Oreille	1	1	2	1	0	0	0	0	1	0	6	0	0	2
Pierce	18	64	11	69	17	11	10	139	26	1	1319	411	22	64
San Juan	0	1	0	2	0	0	1	2	0	0	6	1	0	3
Skagit	5	12	3	20	6	0	4	16	2	0	98	18	1	5
Skamania	0	0	1	0	1	0	0	0	0	0	6	0	1	0
Snohomish	11	63	10	41	11	8	4	55	24	0	559	106	9	42
Spokane	9	54	64	23	1	0	3	36	16	0	554	127	0	23
Stevens	0	2	0	1	0	0	0	0	1	0	44	2	0	1
Thurston	5	21	3	46	1	1	2	34	8	0	245	45	0	5
Wahkiakum	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Walla Walla	1	10	5	1	0	0	0	1	3	0	90	1	2	5
Whatcom	27	32	13	20	0	2	2	42	8	0	204	23	4	11
Whitman	1	6	1	2	0	0	0	0	1	0	56	10	0	1
Yakima	9	88	95	45	3	6	10	133	18	0	531	43	6	15
Unknown														
1996 Total	187	734	333	1001	158	66	116	830	285	38	9237	2020	135	738
1995 Total	140	691	426	937	226	234	126	491	278	17	9462	2765	212	891
Percent Change	+20	+6	+28	+7	-30	-72	-8	+69	+3	+124	-2	-27	-36	-17

*The annual surveillance data for 1996 is a special report for this issue. A copy of the full 1996 report can be obtained from:
Office of Epidemiology, Washington State Department of Health, 1610 NE 150th, Seattle, WA 98155-7224.
The monthly surveillance report will resume in the next issue of *epi*TRENDS.

About 3% of Children Tested Have Elevated Blood Lead Levels

WWW Access Tips

For information on fire prevention, visit the National Fire Protection Association web site at: www.upi.edu/~fpe/nfpa.htm

For information on health effects of lead, visit the web site of the Lead Information Clearinghouse at: www.nsc.org/ehc.lead.htm

Questions? Comments?
If you have a question about epidemiologic or public health issues, contact the editors at the address on the mailing panel or by email at function@u.washington.edu

More than 15,000 children in Washington State have been tested for blood lead levels since the Washington State Department of Health initiated a childhood blood lead registry in May 1993. Elevated levels are a concern because lead damages the kidneys, developing brain, and other body systems and can cause anemia.

Health effects are subtle for blood lead levels of 10–14 µg/dL. Levels of 15–19 µg/dL carry heightened risk of small decreases in IQ, while adverse effects are clearly documented for levels above 20 µg/dL. Data for Washington children show that the percentage with blood lead levels above 10 µg/dL has stayed relatively constant over the past five years of testing — about 2% have had levels above 10 µg/dL and close to 1% have had levels above 15 µg/dL. This registry receives reports of blood lead tests ordered by health care providers from throughout Washington. In general, counties in the central and eastern regions of the state have a higher percentage of children with elevated blood levels than do counties in Western Washington.

Between May 1993 and June 1997, 65 children had a blood lead level of 20 µg/dL or higher; of these, nine were exposed in another state, including four from the same family. Probable sources of exposure have been identified for only 19 of the 56 children exposed in Washington (table). Eighteen cases are still under investigation.

Identifying the source of lead exposure is necessary to prevent further exposure for these children and their siblings or playmates. Follow-up of elevated cases can be time consuming and expensive. Many local health jurisdictions have had difficulty in providing appropriate follow-up because of lack of staff time, money, or both. This year, DOH has received funding from the Centers for Disease Control and Prevention to ensure that all children with blood lead levels of 15 µg/dL or higher receive timely follow-up. In all cases in which the local health jurisdiction cannot provide follow-up or fund environmental testing, DOH will do so or pay to have samples analyzed. If necessary, DOH will also provide funding to retest the child and to test siblings. Knowledge gained through these investigations will help guide the sample selection for the first statewide lead prevalence study, which is planned for the summer of 1998.

For more information on testing activities and the statewide childhood blood lead registry, contact Victoria DeCillo at 360-705-6056 or by e-mail: vxd0303@hub.doh.wa.gov.

TABLE: Sources of lead exposure in 19 cases

No. Cases	Exposure Source
11	paint, soil, or dust
3	home remedy
2	renovation or remodeling
1	parental hobbies
1	ceramics to cook or store food
1	parent's occupation

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- ❒ Last month's issue is still sitting in my "to read" stack.
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We'd like to know where you fall in our population of readers. Since July 1996, the Washington State Department of Health has distributed *epiTRENDS* — our monthly epidemiology and public health practice bulletin — to about 12,000 readers throughout Washington and other areas of the United States. Now, we'd like to hear from you about what you think of *epiTRENDS*, and how we might improve it to better serve your needs. So, please take a few minutes to complete this questionnaire to help us in this effort. Returning this survey also guarantees that you will continue receiving *epiTRENDS* if we need to "downsize" our mailing list in the future. If you no longer wish to receive the bulletin by mail, please check that option on the form.

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Paul Stehr-Green, *State Epidemiologist*
Washington State Department of Health

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